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## BIBLIOGRAPHY ON THERMAL CONTACT CONDUCTANCE

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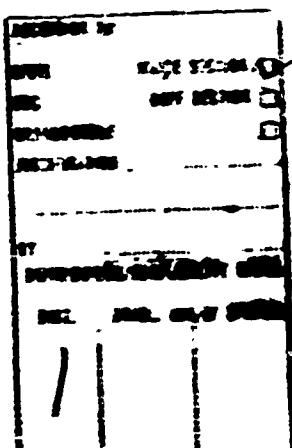
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## **BIBLIOGRAPHY ON THERMAL CONTACT CONDUCTANCE**

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## FOREWORD

This report was prepared by the Thermophysical Properties Research Center (TPRC), Purdue University at the request of Dr. Merrill L. Minges, Air Force Materials Laboratory in support of inhouse research projects under Task 7381, "Materials Applications", Project 738102, "Space, Missile and Propulsion Systems Material and Component Evaluation". Despite the continued perusal of this technical area by Laboratory engineers, a number of new reports of use were found as a result of the TPRC search.

Based on the considerable amount of both basic and applied research being conducted in the area of interfacial heat transport at present and the number of requests coming to the Air Force concerning activity in the area, it was felt that this bibliography would be of considerable interest and utility to workers in the field. Updating of the bibliography through subsequent issue of similar reports is planned at intervals commensurate with the level of new research publications in the area.

Manuscript released by TPRC and the Air Force Materials Laboratory in December 1968 for publication as an AFML Technical Report.

This technical report has been reviewed and approved.

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## ABSTRACT

This report contains a comprehensive bibliographic listing of 423 research papers covering theoretical and experimental work on thermal contact conductance for the period prior to 1966. Each of the papers have been classified into ten subject areas: thermal contact, electrical contact, surface finish, contact physics, theory, experiment, survey, discussion, correlation, and bibliography.

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## INTRODUCTION

Research in the area of interfacial heat transport has been of considerable interest in recent years. The transport problem is an extremely complex one involving many aspects of conventional research areas: thermo-physical properties of materials, surface physics, mechanical and electrical properties of materials. Contributions to the problem can thus be found in many disciplines of the world's literature making it difficult for workers in the field to keep informed.

The purpose of this bibliography is to generate a comprehensive listing of research papers on theoretical and experimental aspects of the general thermal contact conductance problem. This in-depth bibliography should serve to keep the active worker informed as well as provide a convenient method for the uninitiated to become familiar with the problems of this area.

## BIBLIOGRAPHY CLASSIFICATIONS

Ten subject categories have been used to classify the research papers; they are:

<u>Code</u>	<u>Subject</u>
0	Thermal Contact
1	Electrical Contact
2	Surface Finish
3	Contact Physics
4	Theory
5	Experiment
6	Survey
7	Discussion
8	Correlation
9	Bibliography

Papers without code numbers were not available for study prior to this report. The search covers the period prior to 1966 although a number of significant papers beyond this cut-off point have been included.

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13. ABSTRACT This report contains a comprehensive bibliographic listing of 423 research papers covering theoretical and experimental work on thermal contact conductance for the period prior to 1966. Each of the papers have been classified into ten subject areas: thermal contact, electrical contact, surface finish, contact physics, theory, experiment, survey, discussion, correlation, and bibliography.		

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